Patent [19]

[11] **Patent Number: 2000269169**
[45] **Date of Patent: Sep. 29, 2000**

[54] MANUFACTURE OF SEMICONDUCTOR DEVICE AND FORMATION METHOD OF BURIED INTERCONNECTION

[21] Appl. No.: **11074052 JP11074052 JP**

[22] Filed: **Mar. 18, 1999**

[51] **Int. Cl.**[7] **H01L021304** ; B24B03700; H01L0213205; C08J00514; C08L10108

[57] ABSTRACT

PROBLEM TO BE SOLVED: To efficiently flatten a film, to be worked, while the progress of an erosion due to a scratch or the like is being suppressed in a polishing operation by using a slurry for chemical mechanical polishing, which contains a coagulated body in which polymer particles and inorganic particles adsorbed on the polymer particles are contained.

SOLUTION: A slurry for chemical mechanical polishing contains a coagulated body in which polymer particles 1 and inorganic particles 2 adsorbed on the polymer particles 1 are contained. The coagulated body is obtained in such a way that the inorganic particles 2 whose surface potential is different from that of the functional group of the polymer particles 1 are adsorbed to the surface of the polymer particles 1. Accordingly, the rigid inorganic particles 2 on the surface of the coagulated body display a sufficient polishing capability, and the proper elasticity of the polymer particles 1 prevents the generation of a scratch and the progress of an erosion. In addition, the excessive polymer particles 1 creep into abrasive grains so as to display a dummy abrasive-grain effect which prevents an excessive polishing operation, and the erosion is suppressed remarkably.

* * * * *